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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/590,818	06/26/2007	Kurnia Wira	0003179USU/3133	2167
27623	7590	07/02/2009		
OHLANDT, GREELEY, RUGGIERO & PERLE, LLP ONE LANDMARK SQUARE, 10TH FLOOR STAMFORD, CT 06901			EXAMINER NGUYEN, HUY TRAM	
			ART UNIT 1797	PAPER NUMBER
			MAIL DATE 07/02/2009	DELIVERY MODE PAPER

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/590,818	<b>Applicant(s)</b> WIRA, KURNIA	
	<b>Examiner</b> HUY-TRAM NGUYEN	<b>Art Unit</b> 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 26 June 2007.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-34, 37 and 40 is/are allowed.
- 6) ☒ Claim(s) 35, 36, 38, 39, 41-43 and 45 is/are rejected.
- 7) ☒ Claim(s) 44 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 25 August 2008 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)            | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)   | Paper No(s)/Mail Date. _____                                      |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>8/25/06</u>   | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

### ***Claim Rejections - 35 USC § 112***

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 35, 36, 38 and 39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
3. Claims 35, 36, 38 and 39 recite the limitation "said reaction chamber". There is insufficient antecedent basis for this limitation in the claims since Claims 35, 36, 38 and 39 previously recite said first reaction chamber and said second reaction chamber.

### ***Claim Rejections - 35 USC § 102***

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 41, 42, 43 and 45 are rejected under 35 U.S.C. 102(b) as being anticipated by **Aston (US Patent No. 5,640,843)**.

Regarding Claim 41, Aston reference discloses a convergent-divergent nozzle including a means to affect the flow path of said heated gas flow entrained vapourised material through said convergent said convergent-divergent nozzle which includes an means to inject a flow of gas (herein after "flow modifying gas") into the flow path of said

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heated gas flow entrained vapourised material upstream of the divergent portion of said convergent-divergent nozzle which is injected via at least one delivery opening at an angle having a tangential component to the axial direction of said convergent-divergent nozzle (**Figures 1A – numeral 17, Figure 7, numeral 20 and Figure 1C – the flow path being tangential to the axial direction and upstream of the divergent portion**).

Regarding Claim 42, Aston reference discloses the convergent-divergent nozzle as claimed in claim 41 wherein said means to inject includes a plurality of delivery openings for injection of said flow modifying gas (**Figure 1C – more than one opening**).

Regarding Claims 43 and 45, Aston reference discloses the convergent-divergent nozzle as claimed in claim 41. The operating conditions of the nozzle at sub supersonic speeds and flow angle are process limitations which do not add any additional structure limitation to the apparatus of Aston.

### ***Allowable Subject Matter***

6. Claims 1-34, 37 and 40 are allowed.
7. Claim 44 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.
8. The following is a statement of reasons for the indication of allowable subject matter:

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Regarding Claims 1 and 30, the closest prior art, **Miura et al. (US Patent No. 4,617,055)** discloses the claimed apparatus and method steps except for the second reaction stream having been generated by second heat creating means selected from one of a DC plasma torch and RF plasma torch wherein the second heating means including an inlet, an outlet to deliver said second reactant stream to the second reaction chamber and its method steps. There is no suggestion/motivation to modify the apparatus and process of Miura et al. with this structure and process steps.

Claims 2-29, 37, 40 and 31-34 directly or indirectly depend on Claims 1 and 30 respectively.

Regarding Claim 44, the closest prior arts, **Aston (US Patent No. 5,640,843)** and/or **Detering et al. (US Patent No. 5,749,937)** references disclose the claimed convergent-divergent nozzle except for at least one opening of said nozzle into the flow path of said heated gas flow entrained vapourised material at the **throat of said nozzle**.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to HUY-TRAM NGUYEN whose telephone number is (571)270-3167. The examiner can normally be reached on MON- THURS: 6:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Walter Griffin can be reached on 571-272-1447. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

HTN  
6/29/09

/Walter D. Griffin/  
Supervisory Patent Examiner, Art Unit 1797